

Finalization of INTD Selections

***GIF Policy and Experts Meeting: Rio de Janeiro
July 9–10, 2002***



Selections Agreed to in Paris

- ***Advanced CANDU Reactor 700 (ACR-700)*** **CANDU NG**
- ***Integral Primary System Reactors*** **IPSR**
- ***Prismatic Modular Reactor*** **PMR**
- ***Pebble Bed Modular Reactor*** **PBR**



Process Highlights

- *New submittals were due June 16*
 - *11 submittals received*
 - *9 water-cooled*
 - *2 gas-cooled*
 - *TWGs 1 & 2 reviewed them, and finalized their recommendations in Boston on June 26/27*
-
- *All 9 water-cooled were recommended to INTD*
 - *1 gas-cooled was already included within PBR, 1 was rejected on the basis that it was not likely deployable by 2015*



Process Highlights (continued)

- *Reviews primarily performed by the technical directors and co-chairs of the TWGs; comments provided by the members*
- *Sources and amount of information varied*
 - *Some already studied by TWGs*
 - *Some studied under the U.S. NTD roadmap*
 - *Some were new submittals, with information limited to only what was provided*
- *Evaluations against goals were mostly qualitative*
- *None were rejected based on evaluations against goals, only on the likelihood (specifically, the technical feasibility) of deployment by 2015*



Additional Systems Identified - Water

- Advanced Boiling Water Reactor II*** ***ABWR II***
- Advanced Light Water Reactor 600*** ***AP600***
- Advanced Light Water Reactor 1000*** ***AP1000***
- Advanced Pressurized Water Reactor 1400*** ***APR1400***
- Advanced Pressurized Water Reactor Plus*** ***APWR+***
- European Pressurized Water Reactor*** ***EPR***
- Simplified Boiling Water Reactor*** ***ESBWR***
- High Conversion Boiling Water Reactors*** ***HC-BWR***
- Simplified Boiling Water Reactor 1000*** ***SWR-1000***



Sources of Information - Water

<i>Generation IV</i>	<i>U.S. NTDG</i>	<i>RFI Submittal Information</i>
<i>HC-BWR ESBWR</i>	<i>ESBWR AP600 AP1000 SWR-1000</i>	<i>ABWR II APR1400 APWR+ EPR</i>
<i>All candidates were recommended for INTD</i>		



Additional Systems Identified - Gas

- ***Pebble Bed Reactor – Eskom/PBMR Pty. PBMR***
- ***Hydrogen Modular Helium Reactor H2-MHR***



Sources of Information - Gas

<i>Generation IV</i>	<i>U.S. NTDG</i>	<i>RFI Submittal Information</i>
<i>PBMR</i>	<i>PBMR</i>	<i>H2-MHR</i>



Recommendations - Gas

- *Pebble Bed Reactor – Eskom/PMBR Pty.* *PBMR*
 - *Already contained within the PBR concept set accepted for INTD; not necessary to call out separately*
- *Hydrogen Modular Helium Reactor* *H2-MHR*
 - *Deployment not technically feasible by 2015*
 - *IHX operation at 950°C needs development*
 - *Sulfur-iodine (IS) process needs demonstration*
 - *950°C core outlet may not support desired performance, considering temperature differentials on the IHX*
 - *Note: VHTR seeks 1000°C outlet and uses the IS process, but was estimated to be deployable by 2020*



Final INTD Listing

INTD

***ABWR II
ACR-700
AP600
AP1000
APR1400
APWR+
EPR
ESBWR
HC-BWR
IPSR
PBR
PMR
SWR-1000***

